9/81655

Refine Search

Search Results -

Terms	Documents
(((calculat$ with performance)same compar$ same rank$) and (distributor or supplier or seller)) and @pd<=20010323	0

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L11

Refine Search

Recall Text | Clear | Interrupt

Search History

DATE: Saturday, May 01, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR			
L11	(((calculat$ with performance)same compar$ same rank$) and (distributor or supplier or seller)) and @pd<=20010323	0	L11
DB=EPAB,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR			
L10	L5	0	L10
DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR			
L9	L7 and l6	3	L9
L8	L7 and l2	0	L8
L7	(L6 or l2) and link$	3	L7
L6	(((calculat$ with performance)same compar$ same rank$) and (distributor or supplier or seller)) and @ad<=20010323	3	L6
L5	((performance same compar$ same rank$) and (distributor or supplier or seller)) and	34	L5

	@ad<=20010323		
L4	((performance same compar$ same rank$) and (order adj form) and (distributor or supplier or seller)) and @ad<=20010323	0	L4
L3	L2 and (internet or network$ or online or www or web$)	0	L3
L2	(ingredient and (raw adj product) and (order adj form) and (distributor or supplier or seller)) and @ad<=20010323	2	L2
L1	(ingredient and menu and (raw adj product) and (order adj form) and (distributor or supplier or seller)) and @ad<=20010323	0	L1

END OF SEARCH HISTORY

L9: Entry 1 of 3 File: USPT Apr 1, 2003

DOCUMENT-IDENTIFIER: US 6542905 B1
TITLE: Automated data integrity auditing system

Application Filing Date (1):
20000307

Brief Summary Text (20):
The invention also provides text, linked to each data integrity test, that explains to the user the likely explanation for the data integrity issue identified, along with suggestions for correcting the assessment or documenting unusual clinical circumstances that would allow the data integrity issue to arise from a valid assessment. Additionally, the invention provides for the use of the data integrity audit system as the basis of a knowledge management network linking nursing homes. The network would be used for the sharing of clinical best practices, for communicating clinical and administrative advice, and for various commercial purposes.

Detailed Description Text (20):
As a function of processing Prospective Data Integrity Audits, the firm operating the server would have access to fresh data on every patient admitted to every client facility. With the client's permission, this information could be used to target clinical and commercial messages to the clients. The timing and content of the messages is determined by the data coming in about patients' clinical status, payer, expected stay, and service needs. Suppliers of goods and services to nursing facilities are likely to pay to get their messages to facility decision-makers exactly when the facility is likely to need their products. For example, if several newly admitted patients are incontinent of urine, the facility may have need of additional incontinence supplies. A vendor of such supplies would be able to get a message to the facility administrator that referred to the recent admissions and their needs. The client facility would be able to choose whether to be identified to vendors as the recipient of their messages. If client facilities wished to remain anonymous, vendors still could still be told the number and characteristics of the facilities that received their message.

Detailed Description Text (22):
Elements of the Automated Data integrity Auditing System include the following: 1) The operational definition of data integrity given above. 2) A specific set of data integrity tests. a) Individual-level tests: Individual item responses, or combinations of item responses, that are missing, violate coding rules, are done on incorrect dates, are logically impossible, are clinically improbable, or require special documentation. b) Group-level tests: Ratios of item responses or item response combinations in which the numerator and denominator define a logical relationship among MDS items, or the rate of a specific item response or combination. Or, other statistics calculated from facility level MDS data, such as internal consistency estimates or correlation coefficients. These are compared with a test-specific threshold level determined by empirical study of facility-level data, or set by reference to regulatory policy, payer policy, or experience with audits. When the ratio or other statistic is beyond the threshold, there is a data integrity issue. The issue becomes a data validity problem when the clinical record

does not have adequate documentation to explain the observed ratio or statistic. c) Obvious tests: Tests of data completeness and timeliness, adherence to coding conventions, and logical consistency. d) Non-obvious tests: Tests that reflect clinical insight, that are validated by empirical studies of large samples of facility-level data. (Example: It is not logically necessary that a resident with severely impaired decision-making cannot establish their own goals, but clinically this is true, and the relationship has been validated on a sample of over 200 facilities.) e) The method of: i) combining test data to develop an assessment of overall data integrity; ii) describing the probable process problems giving rise to data integrity problems; iii) providing suggested fixes to data integrity issues when these are not obvious; iv) providing specific data integrity tests based on clinical or statistical considerations, as opposed to coding conventions, completeness, assessment dates, or logical relationships. f) A set of specific data integrity tests. g) A set of process analyses and recommendations linked to each data integrity test. 3) A system of weights and thresholds. The system assigns a vector of ordinal variables, binary variables, and a threshold percentage to each data integrity test. The elements of the vector are as follows: a) An ordinal variable representing the relevance of the items involved in the data integrity test to measuring quality of care. For example: a relevance weight of three may represent items that are involved in calculation of an official quality indicator; a relevance weight of two, items that are involved in calculation of a performance measure used by the facility but not mandated by payers or regulators; a relevance weight of one, items that are involved in calculation of risk factors for a quality indicator or performance measure; and a relevance weight of 0, items that are not involved in either risk factors or outcomes for quality indicators or performance measures used by the facility or its payers or regulators. b) A binary variable representing the relevance of the items involved in the data integrity test to the calculation of reimbursement. Multiple binary variables may be used to represent multiple payment systems. c) An ordinal variable related to the estimated likelihood that a documentation audit or regulatory scrutiny will be triggered by the data integrity issue identified by the test. For example: A predictive weight of three may represent a likelihood of audit greater than or equal to 50%; a predictive weight of two, a likelihood of audit between 10% and 50%; a predictive weight of one, a likelihood of audit greater than zero but less than 10%; and a predictive weight of zero, that the item is not used by auditors or regulators. These variables can be updated periodically based on the actual experience of a facility, a chain, or the facilities in a geographic region. d) A threshold value for failure of the test at the facility level. This will be a number between zero and one that defines a threshold for the failure of a test at the facility level. In the case of data integrity tests applicable to individual assessments, the number is the proportion of instances for the given data integrity test that are failed. In the case of statistical data integrity tests applied only to aggregated data, such as internal consistency statistics or correlation coefficients, the threshold is a value of the given statistic. Considering a large population of discrete nursing facilities, many data integrity tests show a bimodal distribution, with one mode at or near 100%, and another several points lower. Multiple threshold values can be used to characterize the severity of an issue. e) A "frequently failed" binary variable that equals one when the data integrity test is failed by a relatively high proportion of facilities with generally valid data. "Relatively high proportion" means greater than or equal to 10% of facilities, but for items with no exceptions expected "relatively high proportion" may be defined to mean greater than or equal to 5% of facilities. f) The "inexcusability weight": an ordinal variable representing how likely it is that there is a clinically reasonable explanation of the data integrity issue at hand. For example, gross logical contradictions, incomplete assessments, and missed deadlines have no excuse. On the other hand, typical clinical relationships among MDS items may not apply in a specialized clinical population. For example: an inexcusability weight of two signifies that there is no reasonable explanation; an inexcusability weight of one signifies that there may be a valid explanation in a special population or under unusual clinical circumstances; and an inexcusability weight of zero

signifies that there are ma[redacted]valid explanations for the fa[redacted]e of the data integrity test related to specific clinical circumstances. 4) For each data integrity issue, a description of likely reasons for its existence--including errors in assessment, coding, data entry, or interpretation of MDS items. 5) For each individual data integrity issue identified by the DIA, a recommended strategy for resolving the issue. This can involve changing one or more item responses, ensuring adequate documentation in the clinical record, or both. 6) For each facility-level, chain-level, association-level or community-level data integrity issue, a description of usual causes and suggestions for addressing them at the organizational level. This may involve changes in work processes, education and training, or information systems. 7) Benchmarking an organization's incidence of data integrity issues against a reference sample of similar organizations (i.e., facilities, chains, associations, or communities). Benchmarks and aggregated scores are used in reporting the data integrity performance of multi-facility organizations. a) Creation of a "report card" organized by sections of the MDS. The report card is a matrix of scores; the vertical axis lists MDS sections; the horizontal axis lists perspectives, e.g., Quality, Medicare Reimbursement, Medicaid Reimbursement, and Regulatory Compliance. Scores are given in each "subject" (MDS section). The scores for each "subject" (MDS section) are based on patient-level data integrity tests that involve items in that MDS section. Each such test yields a percentage--the proportion of patients who passed that data integrity test. Each of the section scores is based upon: a percentage of data integrity tests passed, where each test is weighted based on the perspective (quality, reimbursement, or regulatory), the excuse score, and the likelihood of failure of the test by facilities with generally valid data. The specific formulas are presented below. b) Presenting scores as (graphical) percentile ranks within a reference sample of facilities or organizations, highlighting the one that is the subject of the report, is used to characterize the DIA performance relative to the benchmarks. 8) A listing of patients with data integrity issues, organized by room number in the facility. For each patient, a medical record number, the MDS sections involved, the DIA tests involved, the date of the assessment, the principal diagnosis, and the type of assessment are given. This permits a rapid determination of the locus of assessment errors, and helps target process improvement and in-service training. 9) Comparison of "report cards" across facilities in a chain or association. This permits the identification of strengths and weaknesses among the facilities vis-a-vis resident assessment with the MDS. This in turn aids in performance evaluations of administrators and MDS coordinators, and the planning of in-service training and process improvement efforts. 10) Documentation prompts. Data integrity issues can arise from valid assessments of patients with unusual clinical features or circumstances. Likewise, facility-level data integrity issues can arise when facilities treat unusual clinical populations. However, quality monitors, payers, and regulators may nonetheless focus audits on providers with data integrity issues. Therefore, careful documentation of special circumstances is especially important for MDS items involved in failed data integrity tests. The Data Integrity Audit system provides immediate online prompts to check documentation and to ensure adequacy of documentation in such circumstances. It suggests potential reasons why a data integrity issue might arise from a valid assessment, and offers language that might be useful in writing the supporting documentation. For example, a data integrity issue arises when a patient is scored on the MDS as being comatose, yet also is scored on the same MDS assessment as having a problem with wandering. An unusual circumstance that would give rise to this issue on a valid MDS assessment is one where a patient is admitted to a facility in a coma, but then recovers and begins to wander in a state of confusion. The MDS refers to events occurring in a 7-day assessment reference period rather than reporting the state of affairs at one moment in time. If the 7-day assessment period captured the patient's awakening from coma, it could validly assess the patient as comatose and wandering. The Data Integrity Audit points this out, and suggests that the user carefully document the patient's emergence from coma during the assessment reference period. Documentation prompts also are provided for data integrity issues specific to a particular setting--facility, chain, or community. These are issues that do not represent

logical contradictions or clinical or statistical improbabilities, but nonetheless are items of special concern to payers or regulators. Special data integrity tests are added to the standard set to determine when these documentation prompts are needed. For example, a payer may determine that occupational therapy is used excessively in a particular nursing home chain, and therefore scrutinize the documentation of occupational therapy hours and indications and goals of the therapy. A data integrity test would be added that would be "failed" whenever occupational therapy hours exceeded a specified threshold. The "failure" would trigger a documentation prompt. Of course, the results of these tests would not be included in the calculation of data integrity scores described above. A separate section of the DIA report can be added that shows the number of documentation prompts by diagnosis, location within the facility, and sections of the MDS involved. As with other sections, this section can be used to guide facilities' process improvement efforts and information system design. In one embodiment of the DIA, the provider of the DIA service systematically gathers information about payers' and regulators' audit criteria, and individual facilities' and chains' audit histories. In particular, the DIA service provided to a specific facility or chain includes data integrity tests and documentation prompts addressing the circumstances that have previously triggered focused medical reviews and audits, reduction or denial of payment, or citations by regulators. For a given facility, past experience may allow the computation of a rate at which each data integrity issue has been identified by a payer, regulator, or surveyor as a problem calling for action. Issues with nonzero rates receive maximum weights on the regulatory compliance dimension. For example, consider a facility that has had RUGS-based Medicare payments reduced because a high level of rehabilitation frequently was delivered to residents with severe cognitive impairment. More particularly, over the past six months, 30% of residents in this facility with severe cognitive impairment and 325 minutes of rehabilitation have had their RUGS payments reduced. That is, the data integrity issue has a 30% chance of being seen by the external authorities as a true data validity problem. The DIA for that facility would identify a data integrity issue when the MDS showed severe cognitive impairment (on the MDS-based Cognitive Performance Scale) and 325 minutes of rehabilitation in the past 7 days. This is a data integrity issue because severe cognitive impairment usually limits an individual's ability to profit from rehabilitation. The feedback to the facility would point out that specific clinical record notes were needed to explain the appropriateness of rehabilitation in this resident with severe cognitive improvement. The DIA user would be prompted to reassess cognitive performance, actual hours and days of rehabilitation, and review the clinical record documentation of both the therapy hours and their medical necessity. The test would receive a maximum weight on the regulatory compliance dimension. On the other hand, suppose a facility were audited on all cases with a high level of rehabilitation without regard to the remainder of the MDS. In this case, the data integrity test would trigger a documentation prompt but would not contribute to the data integrity scores. Documentation prompts may be given for data integrity issues that describe clinical relationships that might appear improbable on a first look, but that have many potential explanations or "excuses." These issues receive no weight in the calculation of "report cards". However, such data integrity issues still can become data validity problems if the documentation in the clinical record is inadequate to explain them. The system prompts the user for appropriate documentation in these situations, suggesting where to find and where to record the necessary elements of documentation, and at times proposing specific language to express those elements. Documentation prompts based on a facility's Retrospective DIAs is a feature that facilitates staff training and clinical process improvement. The Prospective DIA provides item change recommendations and documentation prompts. The latter are triggered by universal data integrity issues such as those described in this application, as well as specific issues triggered by regulators' concerns as expressed through publicly-available reports and transmittals, the aggregated regulatory and reimbursement experience of the facilities using the DIA system, and each facility's prior audit history. When specific issues are also universal issues that capture clinical relationships among MDS items, they are included in the data

integrity scores and receive the highest weight on the regulatory compliance and/or reimbursement dimensions. When they are not universal issues or when they are merely specific payers' documentation requirements for individual MDS items, they are not included in the data integrity scores. 11) Estimation of the financial impact of data integrity issues. Payers for nursing home care, e.g., Medicare fiscal intermediaries (FIs), will decrease payment to nursing homes if their reviewer determines that some of the care rendered was not medically necessary, if the relevant MDS assessment was not filed on time, or if there were errors in assessment and coding of items critical to the calculation of the resident's Resource Utilization Group (RUG). Except for downgrades or denials of payment based on gross errors or failure to perform and file electronic MDS assessments

Detailed Description Text (32):
This information about the facilities' resident populations and patterns of admissions forms permits pinpoint marketing communication to the participating facilities. For example, if it were known that several recent admissions required oxygen therapy, the operator of the DIA system might send a customized message to the administrator and nursing director of the facility, mentioning the recent admissions of patients requiring oxygen. The message might notify them of the services of several different vendors of oxygen and respiratory therapy equipment, and might have banner advertisements or hot links to those vendors' Web sites, or advertisements at the end. The operator of the DIA system can charge vendors marketing fees in exchange for advertising space or hot links. Messages can be sent selectively to facilities in need of respiratory therapy services, without necessarily disclosing the names of particular facilities to the vendors without those facilities' consent.

Detailed Description Text (34):
The daily use of the Prospective DIA makes it an excellent vehicle for conveying care planning suggestions, and thereby disseminating best clinical practices. Once a patient's MDS data are corrected and/or documentation of unusual situations is ensured, the DIA system operator can determine diagnoses, conditions, and high-risk situations. Educational text triggered by those diagnoses, conditions, and/or risk factors can be transmitted electronically to the facility. The messages can have within them hot links to references for further information about the clinical issues at hand. For example, if an MDS submitted for a Data Integrity Audit showed poor nutritional status and immobility, the patient would be determined to be at high risk for pressure ulcers. If the assessment of poor nutritional status and immobility remained on the "locked" MDS that would be transmitted to the responsible State agency, the facility would receive an electronic message that the patient whose assessment was just locked had a high risk for skin ulcers. It would advise consideration of special care, including nutritional support and a turning and repositioning program. The report page would also offer a hot link to practice guidelines for the prevention of pressure ulcers.

L2: Entry 1 of 2 File: USPT Jun 12, 2001

US-PAT-NO: 6245370
DOCUMENT-IDENTIFIER: US 6245370 B1

TITLE: Method for producing pizza

DATE-ISSUED: June 12, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Pilati; Marco	Tassullo			IT
Malfatti; Pierluigi	Pergine			IT
Torghele; Claudio	Trento			IT

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Carpos, S.A.				CH	03

APPL-NO: 09/ 294702 [PALM]
DATE FILED: April 19, 1999

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATIONS This application is a continuation-in-part application international application No. PCT/EP98/05093, filed Aug. 12, 1998 and listing the United States as a designated and/or elected country. The entire disclosure of this latter application, including the drawings thereof, is hereby incorporated in this application as if fully set forth herein.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
IT	97A000044	August 19, 1997

INT-CL: [07] A21 D 13/00

US-CL-ISSUED: 426/289; 426/292, 426/293, 426/296, 426/503, 426/505, 426/512, 426/516, 426/518, 426/496
US-CL-CURRENT: 426/289; 426/292, 426/293, 426/296, 426/496, 426/503, 426/505, 426/512, 426/516, 426/518

FIELD-OF-SEARCH: 429/289, 429/292, 429/293, 429/296, 429/512, 429/516, 429/518, 429/496, 429/503, 429/505

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	3735692	May 1973	Marchignoni	99/353
☐	5921170	July 1999	Khatchadourian et al.	99/349
☐	5997924	December 1999	Olander, Jr. et al.	426/296

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0056346	July 1982	EP	
0554926	November 1993	EP	
0708421	April 1996	EP	
9013229	November 1990	WO	

ART-UNIT: 171

PRIMARY-EXAMINER: Cano; Milton

ATTY-AGENT-FIRM: Ewing LLP; Saul

ABSTRACT:

A method for mechanically and automatically producing flat, round, dough and/or pizza bases without the use of baking tins for the dough bases and without using pre-prepared bases. Toppings and/or sauce are applied to the dough bases through at least one topping station. The dough bases are prepared from dough ingredients in a kneading and extrusion device, and then passed through a series of processing stations such as a shaping press, a metering and distribution station for tomato puree or sauce, or several metering stations for the topping, and the baking station, on a preheated transport plate. Each dough base is prepared and provided with a topping according to individual orders from a list.

17 Claims, 11 Drawing figures

L6: Entry 2 of 3 File: USPT Jun 27, 2000

US-PAT-NO: 6081798
DOCUMENT-IDENTIFIER: US 6081798 A
**** See image for Certificate of Correction ****

TITLE: Object oriented case-based reasoning framework mechanism

DATE-ISSUED: June 27, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Johnson; Verlyn Mark	Wykoff	MN		
Koski; Dennis Dale	Rochester	MN		
Shore; Thomas Alan	Rochester	MN		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
International Business Machines Corp.	Armonk	NY			02

APPL-NO: 08/ 639322 [PALM]
DATE FILED: April 24, 1996

INT-CL: [07] G06 F 15/18

US-CL-ISSUED: 706/54; 706/53, 706/60
US-CL-CURRENT: 706/54; 706/53, 706/60

FIELD-OF-SEARCH: 395/75, 395/50, 395/62, 395/76, 395/51, 706/54, 706/59, 706/60, 706/53

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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☐	4943932	July 1990	Lark et al.	706/60
☐	5020019	May 1991	Ogawa	707/5
☐	5057996	October 1991	Cutler et al.	395/676
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☐	5119475	June 1992	Smith et al.	345/353
☐	5181162	January 1993	Smith et al.	707/530
☐	5195172	March 1993	Elad et al.	706/62
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☐	5226161	July 1993	Khoyi et al.	395/683
☐	5247693	September 1993	Bristol	395/705
☐	5249270	September 1993	Stewart et al.	395/200.52
☐	5251131	October 1993	Masand et al.	704/9
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☐	5276775	January 1994	Meng	706/51
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FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
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ART-UNIT: 272

PRIMARY-EXAMINER: Downs; Robert W.

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ABSTRACT:

A framework for use with object-oriented programming systems provides a case-based reasoning (CBR) system shell that permits a framework user to develop a case base having case histories and generates a case-based reasoning system that receives user requests for query solutions and produces a query solution that can be incorporated into the case base. The framework includes a Session component that controls processing of the CBR system, a Control Flow component that manages the extension of the categories and classes of the OO framework, a Data Store component that stores persistent case structure definitions, case instances, and a change log, a Presentation component that manages the user interface to the CBR system user, and a Query Engine that evaluates a received query against the case base. The case definitions and case base descriptions comprise a set of object oriented classes that are organized into an inheritance hierarchy. Also disclosed is a case-based reasoning system that permits dynamic adjustment of property weights in either object oriented programming implementations or procedural programming implementations. This permits users to control which properties and weights are used and whether missing items should penalize case matching.

98 Claims, 49 Drawing figures

L6: Entry 1 of 3 File: USPT Apr 1, 2003

US-PAT-NO: 6542905
DOCUMENT-IDENTIFIER: US 6542905 B1

TITLE: Automated data integrity auditing system

DATE-ISSUED: April 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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Littlehale; Steven B.	Jamaica Plain	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
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APPL-NO: 09/ 519683 [PALM]
DATE FILED: March 7, 2000

PARENT-CASE:
This application claims the benefit of provisional application No. 60/123,736 filed Mar. 10, 1999.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/200
US-CL-CURRENT: 707/200

FIELD-OF-SEARCH: 707/8, 707/100, 707/102, 707/200, 707/202, 283/72, 600/300, 600/301, 705/1, 705/2, 705/3, 705/4, 709/246, 710/19, 714/15, 714/25

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4470116	September 1984	Ratchford	360/5
☐	5359509	October 1994	Little et al.	705/2
☐	5469563	November 1995	Morita	714/25
☐	6082776	July 2000	Feinberg	128/904

ART-UNIT: 2175

PRIMARY-EXAMINER: Mizrahi; Diane D.

ASSISTANT-EXAMINER: Mofiz; Apu M

ATTY-AGENT-FIRM: Lipsitz; Barry R. McAllister; Douglas M.

ABSTRACT:

An automated computer-based data integrity auditing system is provided for use in the healthcare industry, financial industry, academic and educational fields, or any other field in which a need exists for monitoring data integrity. Coded data received from a service organization are checked for proper coding and completeness. The coded data are stored in a computer database together with indicators specifying bad data found during the checking step. The stored coded data are processed in a computer to apply at least one data integrity test to a portion of the data. A score is assigned to the tested portion of data based on the data integrity test. Reports are generated by the computer to identify the score together with suggestions for resolving any data integrity and/or coding and completeness problems determined by the system. Real-time reports can also be provided to the organization to assist in coding and entering the data prior to a formal submission to a government agency or the like.

39 Claims, 1 Drawing figures

L6: Entry 2 of 3 File: USPT Jun 27, 2000

DOCUMENT-IDENTIFIER: US 6081798 A
** See image for Certificate of Correction **
TITLE: Object oriented case-based reasoning framework mechanism

Application Filing Date (1):
19960424

Detailed Description Text (135):
Example A illustrates dynamic adjustment of case weights so properties specified in the query, but not specified in a history case, will not result in a lower evaluation score for that case. This performance is achieved by ignoring the unspecified properties when the normalized weights are calculated. Note, in particular, the processing for the history case with ID=3. For Case 3, Property F is unspecified. The match score calculated for Case 3, listed at the bottom of Example A, ignores the unspecified value from the calculation. Because only case weights are being used for ranking, no dynamic adjustments are required for the extra query property that is present when compared against Case 2.

Detailed Description Text (204):
FIG. 27 illustrates the object relationships and behaviors of the CBRQuery class. The CBRQuery class groups a set of information that is needed to search history cases (case instance descriptions) from the CBR data base. The CBR class may include multiple QueryParameter objects and pattern objects. The CBRQuery class has a dual relationship with the CaseSet class. A CaseSet includes multiple CBRQuery objects while a CBRQuery object uses the CaseSet class in a client-supplier relationship. The CBRQuery class has simple association relationships with the classes called Incident, PropertyMatchSet, and CaseMatchSet.

Detailed Description Text (310):
Connecting lines between mechanisms (FIG. 1) and classes (FIG. 2) indicate the nature of the relationships between such respective abstractions. Thus, connections between the boxes in FIG. 1 represent relationships between the various mechanisms. A straight connecting line, for example, represents a simple association relationship indicating shared information. A "using" relationship is a refinement of a simple association whereby one abstraction that is referred to as a server or supplier provides services to another abstraction that is referred to as a client. Such a relationship is indicated by an open circle at one end of a simple association line, the open circle end designating the client that "uses" the associated server.

Detailed Description Text (318):
Objects and their interrelationships are represented in object diagrams that comprise object icons having links that indicate synchronization between objects. Links are sequentially numbered to indicate the flow of operations. The existence of a link between two objects indicates an association between their corresponding classes and denotes a path of communication between them. Thus, a link between two objects indicates that one object may send messages to another. The direction of message transfer is indicated by adorning a simple connecting line with an arrowhead that points from an object that invokes an operation, referred to as the

client, to the object that provides the operation, referred to as the supplier. Such a representation of a simple synchronization relationship denotes the simplest form of message-passing. Such an association can indicate, for example, the invocation of an operation. Operation parameters can be indicated adjacent the linking line.

Detailed Description Text (319):
Some objects may be active, meaning that they embody their own thread of control. That is, such objects are not simply sequential. Active objects may have a variety of concurrency characteristics. If an object has multiple threads of control, then synchronization must be specified. Message synchronization can be synchronous, meaning that the client will wait until the supplier accepts the message. Synchronous synchronization is indicated with an "X" with an arrowhead. Synchronization can encompass balking message-passing, meaning that the client will abandon the message if the supplier cannot immediately service the message. Balking is indicated with an arrowhead turned back on itself. Synchronization can encompass a time-out synchronization, meaning that the client will abandon the message if the supplier cannot service the message within a specified amount of time. Time-out synchronization is indicated with a clock face representation adjacent a linking arrowhead. Finally, synchronization can encompass an asynchronous message, meaning that the client sends an event to a supplier for processing, the supplier queues the message, and the client then proceeds without waiting for the supplier. Those skilled in the art will appreciate that asynchronous message synchronization is analogous to interrupt handling. Asynchronous message synchronization is indicated with a half arrowhead.

L2: Entry 2 of 2 File: USPT Nov 14, 2000

US-PAT-NO: 6146676
DOCUMENT-IDENTIFIER: US 6146676 A

TITLE: Method and installation for the preparation of meals and/or meal components

DATE-ISSUED: November 14, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Van Milders; Jean Achille Celine Eugene	Knokke			BE

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Hot Cuisine Technologies, naamloze vennootschap				BE	03

APPL-NO: 08/ 945752 [PALM]
DATE FILED: November 6, 1997

PARENT-CASE:
This application is 371 of PCT/BE97/00031 filed Mar. 11, 1997.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
BE	09600214	March 13, 1996

PCT-DATA:

APPL-NO	DATE-FILED	PUB-NO	PUB-DATE	371-DATE	102(E)-DATE
PCT/BE97/00031	March 11, 1997	WO97/33794	Sep 18, 1997	Nov 6, 1997	Nov 6, 1997

INT-CL: [07] B65 B 55/00

US-CL-ISSUED: 426/392; 426/407, 426/410, 426/412, 99/467, 99/468, 99/470, 99/472
US-CL-CURRENT: 426/392; 426/407, 426/410, 426/412, 99/467, 99/468, 99/470, 99/472

FIELD-OF-SEARCH: 426/106, 426/112, 426/113, 426/114, 426/115, 426/129, 426/243, 426/392, 426/394, 426/404, 426/407, 426/410, 426/412, 426/520, 426/393, 99/467, 99/468, 99/470, 99/472

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5421138	June 1995	Muise et al.	53/440

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
8800094	October 1989	BE	
1525884	May 1968	FR	
785795	November 1957	GB	
2059248	April 1981	GB	

ART-UNIT: 171

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ABSTRACT:

A method for the preparation of meals and/or meal components is provided. The method includes the steps of storing base products in spaces provided therefor, pre-treating the base products, packing and vacuum drawing the obtained products, vacuum boiling the packed products, and storing the boiled products in a refrigerated storage room. The steps are realized substantially in this order. An apparatus for the preparation of meals and/or meal component according to this method is also provided.

13 Claims, 2 Drawing figures

DOCUMENT-IDENTIFIER: US 6245370 B1
TITLE: Method for producing pizza

Abstract Text (1):
A method for mechanically and automatically producing flat, round, dough and/or pizza bases without the use of baking tins for the dough bases and without using pre-prepared bases. Toppings and/or sauce are applied to the dough bases through at least one topping station. The dough bases are prepared from dough ingredients in a kneading and extrusion device, and then passed through a series of processing stations such as a shaping press, a metering and distribution station for tomato puree or sauce, or several metering stations for the topping, and the baking station, on a preheated transport plate. Each dough base is prepared and provided with a topping according to individual orders from a list.

Application Filing Date (1):
19990419

Brief Summary Text (3):
The present invention relates to a method and the corresponding apparatus for the mechanized and automatic production of ready-to-eat pizza, flat cakes, and the like, starting from fresh ingredients by individual production based on individual single orders.

Brief Summary Text (9):
It is an object of the present invention to furnish a method and a corresponding device for mechanical and automatic production of pizzas, ordered individually based on an individual selection from a list, and in fact starting from non-pre-cooked and/or non-deep-frozen ingredients for the dough, which pizzas are individually seasoned, spiced, garnished, stuffed and baked and are available ready for consumption within a short time.

Brief Summary Text (16):
a conventional mixer including a charge device for the flour mixture or, respectively, a metering device which empties already pre-mixed and pre-proportioned amounts or partial amounts of the dough ingredients into the kneading device;

Brief Summary Text (20):
a novel device for metering tomato pulp with a tomato pulp distributor;

Brief Summary Text (26):
The invention does not exclude that one or several of the above-recited novel devices are replaced by one or several corresponding conventional devices. The kneading and extrusion device is an essential component of the method. Two transport and kneading worms, operating perpendicular to each other, allow the kneading and extrusion device to realize an effective mixing of the dough components (flour, salt, sugar, yeast, water, etc.), a homogenization, an interspersing, a densification, and finally the extrusion with the discharge of the portion amount based on an independently controllable rotational speed of the two

worms relative to each other. The core piece of this kneading and extrusion device is the transition region from the first worm to the second worm, wherein the second worm disposed perpendicular to the first worm. The dough mass is subjected in this region to a torsion motion with repeated shearing by the worm wall, which effects an intensive interspersing under formation of air bubbles and homogenization, which equals an intensive and continuous kneading through of the mass and is decisive for a uniform shaping and baking through of the flat cake or pizza. The arrangement according to the present invention of the worms, their construction form and the tuning of the worm casing allow in a short time to extrude a professionally prepared portion of dough. The apparatus is cleanly flushed and sterilized with hot air according to a pre-programmed washing and sterilization cycle through an increase of the rotation speed and change of the rotation direction of the worms. A compact dough portion is extruded in case of a proper metering of the ingredients of the dough mixture and upon an exact tuning of the rotation speeds of the two worms. The dough portion is separated at the discharge of the casing, possibly by way of a cutting device, and falls onto the transport plate readied under the casing discharge. A closure plate at the input of the casing and the possible cutting device at the discharge of the casing or at the extrusion nozzle close the kneading device during the standstill of the worms. The transport plate according to the present invention can be produced of different materials and is preferably heated or preheated by electrical thermal resistors so that the dough, or, respectively, the flat cake does not stick to the transport plate and becomes pre-heated during the following work phases in order to obtain thereby the required rigidity in order to not to deform during placement into the baking oven and in order to shorten the baking time.

Brief Summary Text (29):
The transport plate including the formed flat cake is further transported after the shaping of the flat cake under the metering and the distribution device for tomato pulp, sauces or purees. This metering is performed with a peristaltic pump and a ring of nozzles such that several product volumes fall dispersed onto the flat cake disposed therebelow. The distribution of these product volumes is performed with several air beams (foodstuff-suitable air), which exit from air nozzles placed in the region of the product discharge and which several air beams are directed onto the product volumes disposed on the flat cake. It is possible to exchange the complete hose through which the product flows for purposes of cleaning by employing a peristaltic pump, where the feed line, the discharge line, the pump part and the exit nozzles form one single tubular piece. The transport plate passes through several metering stations after the metering station for the tomato pulp, the sauces or the puree, which metering stations can be all of the same kind or of different kinds. The invention teaches in principal two different metering systems, one metering system feeding the garnishing ingredients packed in a bubble band, wherein the ingredients are welded in individual portions in bubbles between two plastic foils, possibly in a controlled atmosphere, and a further metering system, wherein the garnishing ingredients are packed into small dishes, wherein several dishes form a stack and wherein in each case the uppermost dish forms with its floor the cover of the dish below; in this case, the stack of dishes can be packed in a controlled atmosphere. The two packaging systems according to the present invention allow a hygienic foodstuff-friendly packaging, a precise portioning, a simple compact storage within a cooled container in the form of rolls or, respectively, of stacks of dishes, and a controlled waste-free placement onto the surface of the flat cake. As a rule, each of the metering devices for the garnishing ingredients is combined with a dispersing device disposed under the metering devices.

Brief Summary Text (30):
The metering device according to the invention for garnishing ingredients in bubble bands includes a mechanical roller device, wherein the mechanical roller device pulls the bubble band with the welded-in portions from the cooled storage box, and wherein the mechanical roller device pulls apart the two welded foils of the bubble

band above the dispersing mechanism, whereby the ingredient portions (finely cut soft cheese, ham pieces, vegetable pieces, etc.) fall onto the dispersing device and are dispersed by vibration by the dispersing device by falling through a sieve and/or through a grate onto the flat cake disposed below the dispersing device. The sieves and/or grates can be easily exchanged and are made out of a dish-washing-machine-proof material or out of materials which provide for a single use; this invention feature allows to maintain hygienic conditions in a simple way by changing the sieve. The rolled-off foil bands in contrast can run into their own container or can also run back into the cooled container of the bubble band.

Brief Summary Text (31):
The metering device for garnishing ingredients packed in stacks of dishes according to the present invention furnishes that these stacks are entered into cooled magazines and are removed from below by moving a slider past these stacks and wherein these stacks are brought to a tilting station for emptying and are then stored as empty dishes. The already described dispersion device is in this case also disposed below the tilting and discharge station.

Brief Summary Text (32):
The possibility exists that the garnishing ingredients are placed onto the flat cake in a heap without a dispersing device. Of course, a dispersing device can be dispensed with in this case.

Brief Summary Text (33):
It is further to be noted that, depending on the order (according to individual desire), only specific garnishing ingredients are to be placed onto the same flat cake or, respectively, that double or three times the amount of the same garnishing ingredients is to be disposed; in the latter case, the flat cake will remain under the same metering station until the corresponding amount of garnishing ingredients has been dispersed onto the flat cake. This metering system offers to furnish several magazines for dish stacks with different garnishing ingredients, which garnishing ingredients are taken from the same slider and which all can be dispersed onto the flat cake at the same production station. Furthermore, the invention provides that the dishes are subdivided into cells and are furthermore possibly furnished with a grid or grate, and in this fashion a uniform distribution onto the flat cake can be achieved already based on the corresponding diameter of the dish and on the disposition of the product in the cells. The contents can be dispersed by vibrating the open and possibly tilted dish in case of dishes with grid or grate. The baking oven of the installation is conceived for the baking of individual flat cakes. The sliding in of the garnished flat cake, continuously pre-heated during the individual recited work phases by the transport plate, can be performed in a traditional mechanical way or by way of the insertion device according to the present invention, which insertion device is furnished at the transport plate itself. The baking oven includes an insertion opening and a removal opening and, according to the invention, the support plate for the flat cake is rear-ventilated at the bottom side in order to furnish a hot air chamber (hypocausts). The oven itself, the support plate for the flat cake and also the two swivel doors are made of a porous vapor-permeable ceramics in order to guarantee thereby the uptake of the baking vapors and the air exchange (breathing) and in order to be able thus to produce a pizza, which equals in taste a pizza baked in a charcoal-fired oven. The baking oven according to the present invention includes a corresponding heat tunnel disposed at the sliding-in opening and at the removal opening, whereby it is prevented during the sliding in or, respectively, during the removal that the air exchange is performed in the baking zone proper with air preheated in these zones by discharge heat.

Drawing Description Text (3):
FIG. 1 shows a schematic diagram with a device according to the invention for the production of pizzas without illustration of the cooled containers for the individual ingredients and without containers for the packaging elements produced

in a schematic side elevational view,

Drawing Description Text (9):
FIG. 5 shows a schematic diagram of a metering device according to the invention for the garnishing ingredients packed in bubble bands according to the invention and a dispersing device for the garnishing ingredients according to the present invention disposed below the metering device,

Drawing Description Text (10):
FIG. 6 shows a schematic diagram with a metering device according to the invention for the garnishing ingredients packed in dish stacks according to the present invention, without a dispersing device disposed beneath the metering device,

Detailed Description Text (6):
As soon as the dough portion 16 rests on the transport plate 11, the transport plate 11 carries 11d the dough portion 16 to the shaping device 6 (FIG. 3); the shaping device 6 comprises a frame 1b, which frame 1b carries a vertically operating cylinder 6a, wherein the piston rod 6b of the cylinder 6a supports a holder 6c, wherein a heated press plate 6e is attached at the holder 6c, and wherein a circumferential ring 6h is supported vertically slidably 6j under an intermediate action of compression springs 6g with a pin 6f at the holder 6c. Upon lowering 6i of the press plate 6e onto the dough portion 16, the dough portion 16 is flattened to a flat cake 16a of a predetermined thickness. Before the press plate 6e flattens the dough 16, the ring 6h rests at the transport plate 11, without preventing a further lowering 6i of the press plate 6e, in this context, the pin 6f slides axially in the holder 6c and the springs 6g are compressed, the dough flowing out between press plate 6e and transport plate is accumulated in the intermediate slot 6k to a circumferential bead. This bead forms a barrier, wherein the barrier prevents that, in particular upon distribution of tomato pulp or other liquid ingredients onto the flat cake 16a, the tomato pulp or other liquid ingredients flow over the edge of the flat cake, furthermore this bead forms a larger support face for the sliding-in mechanism and thus prevents the deformation of the flat cake during the sliding-in into the baking oven 13.

Detailed Description Text (7):
The formed flat cake 16a is carried 11d further under the tomato-pulp metering device and distributor 7. This device according to the present invention includes a peristaltic pump 7, wherein the feed tube 7b, the pump tube piece 7d, and the discharge tube 7h form an easily exchangeable unit together with the distributor 7 and the branches 7i with the exit nozzles 7e. The branches 7i with the exit nozzles 7e are positioned over the flat cake 16a such that the tomato pulp is deposited in specific amounts at several locations uniformly distributed over the surface of the flat cake. The distribution of these amounts is performed by way of air nozzles 7g coordinated to each exit nozzle 7e, and wherein the air nozzles 7g are fed through a pressure line 7f with compressed air suitable for foodstuff production.

Detailed Description Text (9):
In the following, the flat cake disposed on the transport plate passes through 11d a series of metering devices and dispersing devices 8, 9, or, respectively, 10 for the garnishing ingredients. The method according to the present invention furnishes that the garnishing ingredients are stored and processed absolutely hygienically and according to the foodstuff regulations. In order to achieve this, the present invention furnishes two different metering devices 8 (FIG. 5), 9 (FIG. 6); one metering device furnishes that the garnishing ingredients 8b be welded between two foils 8c, possibly in a controlled atmosphere; the other metering device furnishes that the garnishing ingredients 18a be packed in plastic dishes 18, wherein stacks of dishes are formed and wherein in each case the cover of the dish is formed by the inserted floor of the next following dish. According to a further embodiment of the present invention, the individual dishes can have the required size and possibly round shape and can exhibit cells in order to be able to dispose the

contents already in a uni[redacted]m shape onto the flat cake by [redacted]ting the dish; this method can also be used for more liquid garnishing ingredients such as tomato pulp, sauces and purees. According to a further embodiment of the dishes, the dishes can be furnished with a grate or sieve in order to achieve the distribution of the topping ingredients by vibrating the dish itself. In the two above recited cases, a specific dispersing device 10 is not required and thus the periodic exchange of the grates or sieves 10b is also not required.

Detailed Description Text (13):
When employing the dispersing and metering devices 9, wherein the garnishing ingredients are preproportioned present in dishes, then these dishes can already be stacked in an inclined position, which allows to dispense with a flipping device for the dishes. In this case the contents of the dish will fall on the pizza or onto a dispersing device 10 as soon as the dish is opened.

Detailed Description Text (15):
The dispersion device according to the present invention comprises a vibrating holder 10a, wherein a grate and/or a sieve 10b can be inserted easily exchangeable into the holder 10a; these inserts 10b can have different forms, they are tuned to the size of the pieces of the garnishing ingredients and to the diameter of the flat cake and can be exchanged in a one-way method or in a multiple-way method in order to maintain hygienic conditions.

Detailed Description Text (16):
Depending on the order (according to individual desires) also the multiple amount of certain garnishing ingredients can be applied to a flat cake 16a or also several metering stations 8, 9 can be passed over.

Detailed Description Text (17):
The metering station 9 which is fed with stacks of dishes 18d is suitable for the purpose that for example several stacks of dishes 18d can be furnished with different contents 18a and that the flat cake 16a is covered with several different garnishing ingredients under a single one of these metering stations 9. In this case it is required that transport elements are furnished for the individual stacks of dishes 18d, which transport elements move or let fall 18e the respective stack with the desired ingredients with the lowest dish into the operating region of the slider 9b. This construction allows to build the complete plant in a more compact way and to further shorten the running-through motion lid time of the flat cake 16a as well as the production times. Finally the transport plate 11 reaches the insertion opening 13a (FIG. 7) of the baking oven 13 after the flat cake 16a has been garnished according to individual order and the flat cake has in addition also been pre-heated during the work phase on the transport plate 11. According to the present invention, the transport plate 11 can move into the oven and the pizza is stripped off in the baking chamber or the transport plate 11 can dwell in the oven 13 together with the pizza 16a during the baking process and can be heated in the oven 13 and leave the oven 13 only when prompted by the next order, or, according to the present invention, an insertion device 11b can be constructed on the transport plate 11, which insertion device 11b is placed in insertion position by a cylinder 12, wherein the end of the piston rod of the cylinder 12 is furnished with a corresponding latching device 12a, wherein the latching device 12a actuates the insertion device and slides 11c the pizza 16a away 16b over the transport plate 11, through the insertion tunnel 13a, below the opening of the swivel door 13e, into the baking zone, where the pizza remains laying. In the following, the insertion device 11a is again retracted 11c. The opening and reclosing of the swivel door 13e according to the present invention is performed by two pins projecting from the side of the transport plate in a forward direction, which pins swivel open the swivel door 13 toward the baking zone 13c during the approach of the transport plate 11 to the insertion opening 13a, and which pins allow the swivel door to freely swivel closed after the transport plate 11 leaves said position. The pulling out 16c of the baked pizza 16a can be performed in a conventional manner, according

to the present invention [redacted] pizza can be removed again w[redacted]he transport plate 11 itself through the insertion opening 13a, or according to the invention the pizza can be removed through a second opening 13b in line with the first opening or staggered, for example by 90 degrees, relative to the first, with its own removal device 14. This removal device 14 according to the present invention comprises a takeout grate 14b, slidable 14d with a cylinder 14g at guides 14a and with upwardly bent side edges, wherein the side edges are higher as compared with the height of the pizza 16a and which side edges open the swivel door 13u upon insertion. The grate 14b is a slid under the baked pizza 16a and is pulled out 14d together with the pizza through the withdrawal tunnel 13b, wherein the swivel door 13u moves again automatically into a closure position. In the following, the take-out grate 14b is swivelled upwardly 14e over a bearing axle 14f, whereby the baked pizza slides off 16c and onto a readied dish or onto a take-out container. The swivel motion of the take-out grate 14b can, of course, also be performed sideways.

Detailed Description Text (21):
1. The kneading, forming, garnishing, baking and the delivery of pizza to the customer starting from the base components (flour, water, fermenting agent, rising agent, salt, etc.) and the garnishing ingredients (tomato puree, mozzarella, ham, mushrooms, etc.) and without human interaction:

Detailed Description Text (22):
a. By completely automatic preparation of the dough within a short time in the apparatus, wherein the base components (flour, water, fermenting agent, rising agent, salt etc.) are automatically portioned or are already pre-portioned by feeding in the ingredients with a bubble band (8a) or with dishes (18) united to stacks, wherein a single flour mixture portion is transported into the kneading device or wherein the flour mixture part amounts are entered and transported into the kneading device.

Detailed Description Text (26):
c. By a presence of all garnishing ingredients pre-portioned in bubble bands 8a and/or in dishes 18 and by placing with the devices for metering of garnishing ingredients, with or without dispersing mechanism 10, onto the flat cake. This holds also for the tomato puree, for mozzarella or ham.

Detailed Description Text (27):
Practical experience has shown that the device for metering and distribution of tomato puree as shown in FIG. 4 can be simplified by having a larger number of nozzles in the nozzle ring 7e in order to obtain thereby a uniform distribution of the product also without air nozzles 7g. It has been noticed that the tomato puree applied in this fashion is further distributed on the surface of the flat cake by the thereafter provided application of mozzarella or other garnishing ingredients and in particular by the melting process and the thermal interaction. In order to prevent a soiling by dripping tomato puree from the nozzles after the flat cake has been transported 11d there is slid 7k a capturing cup 7j under the nozzle ring 7e. This capturing cup 7j is exchanged during the maintenance of the installation by a clean cup.

Detailed Description Text (28):
2. The selection and/or combining of the garnishing ingredients (tomato puree, mozzarella, ham, salami, mushrooms, etc.) also for each individual order from the customer after the selection from an offer list:

Detailed Description Text (29):
a. By having readily available pre-portioned garnishing ingredients in bubble bands 8a and/or in dishes 18 and the corresponding metering devices 8, 9 and dispersion devices 10.

Detailed Description Text (31):

a. Based on a metering and dispersing device 8a (FIG. 6a) comprising cooled container 19, wherein a downwardly flipped container 19a with a downward opening and with the comminuted present garnishing product 19e is disposed in the cooled container 19. A double grid 19b is furnished under the opening of the flipped container 19a, which double grid 19b is moved by a known rattling mechanism 19d in a direction perpendicular to the exit direction 19f of the garnishing components 19e. The two grids or grates 19b are disposed parallel to each other and at the distance from each other, wherein the passage openings are tuned to the piece size of the garnishing ingredients and can be different for the two grids or grates 19b. The metering and dispersing device is furnished under these rattling grids 19d. The metering and dispersing device comprises a longitudinally shiftable 19n perforated plate 19k, which perforated plate 19k is led between two parallel disposed perforated sheet metal pieces 19g and 19h. The bore holes of the upper perforated sheet metal piece 19g are, relative to the bore holes of the lower perforated sheet metal piece, staggerred thereby at least by the diameter of the perforation hole. The perforated plate 19k is staggered initially into a position during the longitudinal motion 19k with its boreholes, where its bore holes coincide with the boreholes of the upper perforated sheet metal piece 19g; in this position the garnishing pieces 19e, which have fallen 19f through the shaking grids 19b, fall through the boreholes of the upper perforated sheet metal piece 19f, through the boreholes of the upper perforated sheet metal piece 19g and fill the boreholes of the perforated plate 19k, which are thereupon shifted 19n in the longitudinal direction. As soon as the boreholes of the perforated plate 19k coincide with the boreholes of the perforated sheet metal piece 19h, then the garnishing particles 19e can freely fall downwardly onto the pizza 16a. The number and the disposition of the boreholes in the perforated sheet metal pieces 19g, 19h and in the perforated plate 19k are selected such that a dispersion as uniform as possible and the surface covering is achieved. The invention does not exclude that the perforated plate 19k is disposed rotatable between the perforated sheet metal pieces 19g, 19h and in each case is moved further in this direction around the staggered hole distance of the concentrically disposed bore holes or is moved forward and backward. The filling of the boreholes of the perforated plate 19k is favored by the surrounding wall 19q, which connects the rattling grids 19b and which drags with its lower edge on the upper perforated sheet metal piece 19g; some continuously possibly sticking garnishing particles are individualized by the motion 19c of the rattling grids 19b and of the wall 19q.

Detailed Description Text (33):
a. This extremely short preparation time of the raw product is made possible by the employment of the invention device for the preparation of the dough 5 (FIG. 2) and by the recited pre-portioning of the base components and/or of the garnishing ingredients according to the present invention.

Detailed Description Text (34):
5. The discharge and delivery of the baked pizza within about 90 seconds after ordering by the customer; this short time is made possible not only by the extremely short preparation time of the raw product (about 20 seconds, compare point 4) but in addition by the short baking time of about 70 seconds which is achieved by the following arrangements according to the present invention:

Detailed Description Text (35):
a. By the pre-heating of the dough or, respectively, of the flat cake immediately after the exit 5j out of the extruding nozzle 5i on the pre-heated or, respectively, continuously heated transport plate 11, during the formation of the flat cake and during the application of the garnishing ingredients,

Detailed Description Text (36):
b. By the baking of the flat cake and also of the applied garnishing ingredients upon passing 16b of the pre-heating tunnel 13a, of the baking oven 13,

Detailed Description Text (40):
6. The automatic repetition of the complete course of production initiated by each new order placed, also upon ordering of several like or different kinds of pizza, without use of the prepared (deep frozen and/or pre-cooked) flat cakes and/or garnishing ingredients:

Detailed Description Text (41):
a. By the pre-proportioning of the dough base components and of the garnishing ingredients, which in each case are taken as quantity units (bubble band, dish stack) from (possibly cooled) storage containers,

Detailed Description Text (42):
b. By the automatic opening and emptying of the portion package containing the ingredients and the dispersion of the ingredients, or

CLAIMS:

1. A method for a mechanized and automatic production of flat cakes and/or pizzas comprising

organizing production and garnishing of a flat cake based on an individual order according to a selection list;

preparing an individual flat cake precursor of dough ingredients as an individual dough portion, wherein the pizza is produced by taking into consideration a desired amount of individual ingredients for preparing the dough, and wherein pre-proportioned dough ingredients are employed;

passing the precursor through a kneading and extrusion apparatus;

passing the precursor on a heated transport plate through a shaping press;

passing the precursor on a heated transport plate through a metering and distribution device for tomato pulp, and sauces;

passing the precursor on a heated transport plate through a metering station for the garnishing ingredients, wherein the flat cake is topped with garnishing ingredients under the metering station for the garnishing ingredients, wherein pre-proportioned amounts of garnishing ingredients are employed, and wherein the pizza is produced by taking into consideration a desired amount of the garnishing ingredients and/or spices;

passing the precursor on a heated transport plate through a baking station, wherein the production comprises a complete production cycle, wherein no pre-produced and/or pre-cooked semi-finished products are employed in the production; and

maintaining permanently parts of a production installation which are not already subjected to a continuous germicidal effect based on temperature influence in a hygienic state corresponding to the regulations concerning foodstuffs either by a programmed cleaning and sterilization cycle employing water and hot air in connection with cleaning and germicidal agents and/or by a simple exchange of the device components; wherein no baking forms are used for the flat cakes and wherein no already preshaped flat cakes are employed in the production.

3. The method according to claim 1 further comprising

mixing pre-metered dough components;

kneading pre-metered dough components;

densifying pre-metered dough components;

homogenizing pre-metered dough components;

extruding pre-metered dough components as compact dough portions;

ejecting pre-metered dough components from two worm casings disposed successively and perpendicular to each other with corresponding worms, wherein in particular in the region of the transition of the dough from the first worm to the second worm the dough experiences an intensive interspersing based on a torsion and repeated shearing, which intensive interspersing favors an incorporation of air;

closing the feed to the first worm casing and the exit opening of the second worm casing upon standstill of the apparatus by a slider or, respectively, by a separating spatula for the dough portion;

adapting the rotation speed of the two worms by an independent setting to the properties and to the quantity ratio of the ingredients; and

increasing the rotation speed of the worms and changing the direction of rotation during a flushing and sterilization cycle.

4. The method according to claim 1 further comprising

shaping the flat cake is performed by a heated pressing device, forming the dough welling up between press faces in an edge region as an edge bead in order to form thus a barrier for the successive placing and distribution of ingredients on the surface of the flat cake and in order to form a larger rest face for the insertion mechanism, which prevents a deformation of the flat cake during insertion into the oven.

12. The method according to claim 1 further comprising

employing a controlled atmosphere for surrounding the garnishing ingredients and spices in form of unit portions combined to bubble bands or to stacks of dishes in cooled storage containers, from which storage containers the garnishing ingredients and spices are removed in each case immediately prior to use, and wherein the dough components are kept in storage as a mixture or in the shape of partial mixtures in such packaging, and wherein the dough components are emptied as required above the dough kneading station and extrusion station.

13. The method according to claim 1 further comprising

containing the garnishing ingredients of a liquid consistency in dishes with a cellular subdivision, and wherein the uniform distribution on the surface of the flat cake is performed by tilting the dish, by the corresponding dish diameter, without dispersing device and without distribution through air beams.

14. The method according to claim 1 further comprising

furnishing the dishes themselves with a grate or sieve for the garnishing ingredients and emptying the dishes through vibration in a tilted position, wherein the contents of the dishes is dispersed onto the surface of the flat cake.

15. A method for a mechanized and automatic production of flat cakes and/or pizzas without using baking forms for the flat cakes and without already preshaped flat cakes, wherein the flat cake is topped with garnishing ingredients under at least one garnishing station, comprising the steps of

each, individual flat cake (16a) is prepared of individual dough ingredients or of

a pre-portioned mixture of ingredients as an individual dough portion (16) in a kneading and extrusion apparatus (5) and passes in the following on a pre-heated or continuously heated transport plate (11) through a series of processing stations including a shaping press (6), a metering and distribution device (7) for tomato pulp, sauces, one or several metering stations (8, 9) for the garnishing ingredients, as well as the baking station (13), by having the flat cake (16a) produced and garnished based on individual order according to a selection list, wherein the production comprises a complete production cycle, wherein the pizza is produced also by taking into consideration a desired amount of the garnishing ingredients and/or spices starting from the individual ingredients for preparing the dough, without use of pre-produced and/or pre-cooked semi-finished products, under use of pre-proportioned garnishing ingredients or, respectively, dough ingredients, and wherein parts of a production installation which are not already subjected to a continuous germicidal effect based on temperature influence are maintained permanently in a hygienic state corresponding to the regulations concerning foodstuffs either by a programmed cleaning and sterilization cycle employing water and hot air in connection with cleaning and germicidal agents and/or by a simple exchange of the device components (7b, 7c, 7d, 7h, 7i, 7e; 10b).

16. The method according to claim 15, wherein the production cycle starts with the pre-heating of a transport plate (11) in the baking oven (13) or by heating elements built into the transport plate (11), wherein the baking process for the pizza (16a) starts already with the shaping (5) of the flat cake (16a), and wherein the baking process continues during the complete following work phases for garnishing, stuffing, and seasoning either based on the heat dissipation of the pre-heated transport plate (11) or by the continuous heating of the transport plate (11), such that the pizza (16a) disengages without any problem from the support plate (11) upon insertion (16b) into the baking oven (13) and exhibits the necessary consistency in order to be slid into the oven (13) with a slide-in mechanism (11a) without deforming the flat cake or, respectively, to be retained in the oven (13);

wherein the pre-metered dough components are mixed, kneaded, densified, homogenized and extruded as compact dough portions (16) and are ejected (5j) from two worm casings (5k, 5m) disposed successively and perpendicular to each other with corresponding worms (5a, 5b), wherein in particular in the region of the transition of the dough from the first worm (5a) to the second worm (5b) the dough experiences an intensive interspersing based on a torsion and repeated shearing, which intensive interspersing favors an incorporation of air, wherein the feed (5c) to the first worm casing (5k) and the exit opening (5i) of the second worm casing (5m) is closed upon standstill of the apparatus by a slider or, respectively, by a separating spatula for the dough portion, wherein the rotation speed of the two worms (5a, 5b) can be adapted by an independent setting to the properties and to the quantity ratio of the ingredients, and wherein the rotation speed of the worms (5a, 5b) is increased and the direction of rotation is changed during the flushing and sterilization cycle;

wherein the shaping of the flat cake is performed by a heated pressing device, wherein the dough welling up between the press faces in the edge region is formed as an edge bead in order to form thus a barrier for the successive placing and distribution of ingredients on the surface of the flat cake and in order to form a larger rest face for the insertion mechanism (11d), which prevents a deformation of the flat cake during insertion into the oven;

wherein a single transport plate (11) moves back and forth (11a) between the dough extruder station (5) and the baking oven (13) along the production line of the installation and wherein the single transport plate (11) is possibly pre-heated in the baking oven (13);

wherein a single transport plate (11) moves along a plane direction of the baking oven (13) along the production line of the installation and moves along a plane disposed below the baking oven (23) in a direction of the dough extruder station (5).

17. The method according to claim 15, wherein two or more transport plates (11) are furnished for the same production line, which transport plates (11) are moved by a common drive mechanism (15);

wherein the production line is arranged in a circle, wherein one or several transport plates (11) can be furnished;

wherein several production lines feed a baking oven with several baking chambers, separated from each other, or feed a baking oven (13), which is shifted in each case to the respective production line in case of need;

wherein the flat cakes (16a) are inserted and removed through a single oven opening (13a);

wherein the flat cakes (16a) are inserted into the oven (13) through its own insertion opening (13a) and are removed through its own removal opening (13b), which removal opening (13b) is aligned with the respective insertion opening or is furnished staggered or, respectively, twisted relative to this insertion opening;

wherein the garnishing ingredients and spices are present in a controlled atmosphere, in form of unit portions (8, 18a) combined to bubble bands (8a) or to stacks of dishes (18d) in cooled storage containers, from which storage containers the garnishing ingredients and spices are removed in each case immediately prior to use, and wherein also the dough components are kept in storage as a mixture or in the shape of partial mixtures in such packaging, and wherein the dough components are emptied as required above the dough kneading station and extrusion station (5);

wherein the garnishing ingredients possibly also of a liquid consistency are contained in dishes (18) with a cellular subdivision, and wherein the uniform distribution on the surface of the flat cake is performed by tilting the dish (18), by the corresponding dish diameter, without dispersing device (10) and without distribution through air beams;

wherein the dishes (18) themselves are furnished with a grate or sieve for the garnishing ingredients (18a) and are emptied through vibration in a tilted position, wherein the contents is dispersed onto the surface of the flat cake.

L2: Entry 2 of 2 File: USPT Nov 14, 2000

DOCUMENT-IDENTIFIER: US 6146676 A
TITLE: Method and installation for the preparation of meals and/or meal components

Application Filing Date (1):
19971106

Brief Summary Text (6):
The invention aims at offering a method with which meals or components of meals may be realized which may be served quickly and simply, via a given regeneration technique, as fresh and, from a culinary viewpoint, high standard meals. The method is directed to the distributors who present the meals to the consumers.

Brief Summary Text (8):
This order of steps produces the effect that no crossing arises between the paths that are followed by the raw products, semi-finished and finished products, making the spreading of bacteria or other forms of pollution impossible.

Detailed Description Text (4):
Prior to the storage of base products 6 in spaces 7-8, as schematically represented with reference 10, the substantially raw ingredients may be inspected. Such inspection preferably comprises one or more operations, among which:

Detailed Description Text (5):
control of characteristics agreed upon with the suppliers, with respect to freshness, quality, portioning, cut, agreed weight tolerances, etcetera;

Detailed Description Text (8):
control of weight and nature of the ordered raw material according to order forms.

Detailed Description Text (22):
pre-steaming some well-defined ingredients, followed by a fast cooling-down;

Detailed Description Text (23):
mixing different ingredients and preparations;

Detailed Description Text (33):
With the vacuum packing, all obtained products 9 which form the ingredients of a combination are brought together. Hereby, dosage systems and scales are used. Preferably, everything is packed in singular forms of packing having different measures. This may also be bulk packing.

Detailed Description Text (45):
According to the invention, the products are provided with thermal labels on which not only the name of the product is mentioned, but also all ingredients, the ultimate date of keeping qualities, admission numbers for export and data relating to the firm.

L6: Entry 1 of 3 File: USPT Apr 1, 2003

DOCUMENT-IDENTIFIER: US 6542905 B1
TITLE: Automated data integrity auditing system

Application Filing Date (1):
20000307

Detailed Description Text (20):
As a function of processing Prospective Data Integrity Audits, the firm operating the server would have access to fresh data on every patient admitted to every client facility. With the client's permission, this information could be used to target clinical and commercial messages to the clients. The timing and content of the messages is determined by the data coming in about patients' clinical status, payer, expected stay, and service needs. Suppliers of goods and services to nursing facilities are likely to pay to get their messages to facility decision-makers exactly when the facility is likely to need their products. For example, if several newly admitted patients are incontinent of urine, the facility may have need of additional incontinence supplies. A vendor of such supplies would be able to get a message to the facility administrator that referred to the recent admissions and their needs. The client facility would be able to choose whether to be identified to vendors as the recipient of their messages. If client facilities wished to remain anonymous, vendors still could still be told the number and characteristics of the facilities that received their message.

Detailed Description Text (22):
Elements of the Automated Data Integrity Auditing System include the following: 1) The operational definition of data integrity given above. 2) A specific set of data integrity tests. a) Individual-level tests: Individual item responses, or combinations of item responses, that are missing, violate coding rules, are done on incorrect dates, are logically impossible, are clinically improbable, or require special documentation. b) Group-level tests: Ratios of item responses or item response combinations in which the numerator and denominator define a logical relationship among MDS items, or the rate of a specific item response or combination. Or, other statistics calculated from facility level MDS data, such as internal consistency estimates or correlation coefficients. These are compared with a test-specific threshold level determined by empirical study of facility-level data, or set by reference to regulatory policy, payer policy, or experience with audits. When the ratio or other statistic is beyond the threshold, there is a data integrity issue. The issue becomes a data validity problem when the clinical record does not have adequate documentation to explain the observed ratio or statistic. c) Obvious tests: Tests of data completeness and timeliness, adherence to coding conventions, and logical consistency. d) Non-obvious tests: Tests that reflect clinical insight, that are validated by empirical studies of large samples of facility-level data. (Example: It is not logically necessary that a resident with severely impaired decision-making cannot establish their own goals, but clinically this is true, and the relationship has been validated on a sample of over 200 facilities.) e) The method of: i) combining test data to develop an assessment of overall data integrity; ii) describing the probable process problems giving rise to data integrity problems; iii) providing suggested fixes to data integrity issues when these are not obvious; iv) providing specific data integrity tests based on

clinical or statistical considerations, as opposed to coding conventions, completeness, assessment dates, or logical relationships. f) A set of specific data integrity tests. g) A set of process analyses and recommendations linked to each data integrity test. 3) A system of weights and thresholds. The system assigns a vector of ordinal variables, binary variables, and a threshold percentage to each data integrity test. The elements of the vector are as follows: a) An ordinal variable representing the relevance of the items involved in the data integrity test to measuring quality of care. For example: a relevance weight of three may represent items that are involved in calculation of an official quality indicator; a relevance weight of two, items that are involved in calculation of a performance measure used by the facility but not mandated by payers or regulators; a relevance weight of one, items that are involved in calculation of risk factors for a quality indicator or performance measure; and a relevance weight of 0, items that are not involved in either risk factors or outcomes for quality indicators or performance measures used by the facility or its payers or regulators. b) A binary variable representing the relevance of the items involved in the data integrity test to the calculation of reimbursement. Multiple binary variables may be used to represent multiple payment systems. c) An ordinal variable related to the estimated likelihood that a documentation audit or regulatory scrutiny will be triggered by the data integrity issue identified by the test. For example: A predictive weight of three may represent a likelihood of audit greater than or equal to 50%; a predictive weight of two, a likelihood of audit between 10% and 50%; a predictive weight of one, a likelihood of audit greater than zero but less than 10%; and a predictive weight of zero, that the item is not used by auditors or regulators. These variables can be updated periodically based on the actual experience of a facility, a chain, or the facilities in a geographic region. d) A threshold value for failure of the test at the facility level. This will be a number between zero and one that defines a threshold for the failure of a test at the facility level. In the case of data integrity tests applicable to individual assessments, the number is the proportion of instances for the given data integrity test that are failed. In the case of statistical data integrity tests applied only to aggregated data, such as internal consistency statistics or correlation coefficients, the threshold is a value of the given statistic. Considering a large population of discrete nursing facilities, many data integrity tests show a bimodal distribution, with one mode at or near 100%, and another several points lower. Multiple threshold values can be used to characterize the severity of an issue. e) A "frequently failed" binary variable that equals one when the data integrity test is failed by a relatively high proportion of facilities with generally valid data. "Relatively high proportion" means greater than or equal to 10% of facilities, but for items with no exceptions expected "relatively high proportion" may be defined to mean greater than or equal to 5% of facilities. f) The "inexcusability weight": an ordinal variable representing how likely it is that there is a clinically reasonable explanation of the data integrity issue at hand. For example, gross logical contradictions, incomplete assessments, and missed deadlines have no excuse. On the other hand, typical clinical relationships among MDS items may not apply in a specialized clinical population. For example: an inexcusability weight of two signifies that there is no reasonable explanation; an inexcusability weight of one signifies that there may be a valid explanation in a special population or under unusual clinical circumstances; and an inexcusability weight of zero signifies that there are many valid explanations for the failure of the data integrity test related to specific clinical circumstances. 4) For each data integrity issue, a description of likely reasons for its existence--including errors in assessment, coding, data entry, or interpretation of MDS items. 5) For each individual data integrity issue identified by the DIA, a recommended strategy for resolving the issue. This can involve changing one or more item responses, ensuring adequate documentation in the clinical record, or both. 6) For each facility-level, chain-level, association-level or community-level data integrity issue, a description of usual causes and suggestions for addressing them at the organizational level. This may involve changes in work processes, education and training, or information systems. 7) Benchmarking an organization's incidence of

data integrity issues against a reference sample of similar organizations (i.e., facilities, chains, associations, or communities). Benchmarks and aggregated scores are used in reporting the data integrity performance of multi-facility organizations. a) Creation of a "report card" organized by sections of the MDS. The report card is a matrix of scores; the vertical axis lists MDS sections; the horizontal axis lists perspectives, e.g., Quality, Medicare Reimbursement, Medicaid Reimbursement, and Regulatory Compliance. Scores are given in each "subject" (MDS section). The scores for each "subject" (MDS section) are based on patient-level data integrity tests that involve items in that MDS section. Each such test yields a percentage--the proportion of patients who passed that data integrity test. Each of the section scores is based upon: a percentage of data integrity tests passed, where each test is weighted based on the perspective (quality, reimbursement, or regulatory), the excuse score, and the likelihood of failure of the test by facilities with generally valid data. The specific formulas are presented below. b) Presenting scores as (graphical) percentile ranks within a reference sample of facilities or organizations, highlighting the one that is the subject of the report, is used to characterize the DIA performance relative to the benchmarks. 8) A listing of patients with data integrity issues, organized by room number in the facility. For each patient, a medical record number, the MDS sections involved, the DIA tests involved, the date of the assessment, the principal diagnosis, and the type of assessment are given. This permits a rapid determination of the locus of assessment errors, and helps target process improvement and in-service training. 9) Comparison of "report cards" across facilities in a chain or association. This permits the identification of strengths and weaknesses among the facilities vis-a-vis resident assessment with the MDS. This in turn aids in performance evaluations of administrators and MDS coordinators, and the planning of in-service training and process improvement efforts. 10) Documentation prompts. Data integrity issues can arise from valid assessments of patients with unusual clinical features or circumstances. Likewise, facility-level data integrity issues can arise when facilities treat unusual clinical populations. However, quality monitors, payers, and regulators may nonetheless focus audits on providers with data integrity issues. Therefore, careful documentation of special circumstances is especially important for MDS items involved in failed data integrity tests. The Data Integrity Audit system provides immediate online prompts to check documentation and to ensure adequacy of documentation in such circumstances. It suggests potential reasons why a data integrity issue might arise from a valid assessment, and offers language that might be useful in writing the supporting documentation. For example, a data integrity issue arises when a patient is scored on the MDS as being comatose, yet also is scored on the same MDS assessment as having a problem with wandering. An unusual circumstance that would give rise to this issue on a valid MDS assessment is one where a patient is admitted to a facility in a coma, but then recovers and begins to wander in a state of confusion. The MDS refers to events occurring in a 7-day assessment reference period rather than reporting the state of affairs at one moment in time. If the 7-day assessment period captured the patient's awakening from coma, it could validly assess the patient as comatose and wandering. The Data Integrity Audit points this out, and suggests that the user carefully document the patient's emergence from coma during the assessment reference period. Documentation prompts also are provided for data integrity issues specific to a particular setting--facility, chain, or community. These are issues that do not represent logical contradictions or clinical or statistical improbabilities, but nonetheless are items of special concern to payers or regulators. Special data integrity tests are added to the standard set to determine when these documentation prompts are needed. For example, a payer may determine that occupational therapy is used excessively in a particular nursing home chain, and therefore scrutinize the documentation of occupational therapy hours and indications and goals of the therapy. A data integrity test would be added that would be "failed" whenever occupational therapy hours exceeded a specified threshold. The "failure" would trigger a documentation prompt. Of course, the results of these tests would not be included in the calculation of data integrity scores described above. A separate section of the DIA report can be added that shows the number of documentation

prompts by diagnosis, location within the facility, and sections of the MDS involved. As with other sections, this section can be used to guide facilities' process improvement efforts and information system design. In one embodiment of the DIA, the provider of the DIA service systematically gathers information about payers' and regulators' audit criteria, and individual facilities' and chains' audit histories. In particular, the DIA service provided to a specific facility or chain includes data integrity tests and documentation prompts addressing the circumstances that have previously triggered focused medical reviews and audits, reduction or denial of payment, or citations by regulators. For a given facility, past experience may allow the computation of a rate at which each data integrity issue has been identified by a payer, regulator, or surveyor as a problem calling for action. Issues with nonzero rates receive maximum weights on the regulatory compliance dimension. For example, consider a facility that has had RUGS-based Medicare payments reduced because a high level of rehabilitation frequently was delivered to residents with severe cognitive impairment. More particularly, over the past six months, 30% of residents in this facility with severe cognitive impairment and 325 minutes of rehabilitation have had their RUGS payments reduced. That is, the data integrity issue has a 30% chance of being seen by the external authorities as a true data validity problem. The DIA for that facility would identify a data integrity issue when the MDS showed severe cognitive impairment (on the MDS-based Cognitive Performance Scale) and 325 minutes of rehabilitation in the past 7 days. This is a data integrity issue because severe cognitive impairment usually limits an individual's ability to profit from rehabilitation. The feedback to the facility would point out that specific clinical record notes were needed to explain the appropriateness of rehabilitation in this resident with severe cognitive improvement. The DIA user would be prompted to reassess cognitive performance, actual hours and days of rehabilitation, and review the clinical record documentation of both the therapy hours and their medical necessity. The test would receive a maximum weight on the regulatory compliance dimension. On the other hand, suppose a facility were audited on all cases with a high level of rehabilitation without regard to the remainder of the MDS. In this case, the data integrity test would trigger a documentation prompt but would not contribute to the data integrity scores. Documentation prompts may be given for data integrity issues that describe clinical relationships that might appear improbable on a first look, but that have many potential explanations or "excuses." These issues receive no weight in the calculation of "report cards". However, such data integrity issues still can become data validity problems if the documentation in the clinical record is inadequate to explain them. The system prompts the user for appropriate documentation in these situations, suggesting where to find and where to record the necessary elements of documentation, and at times proposing specific language to express those elements. Documentation prompts based on a facility's Retrospective DIAs is a feature that facilitates staff training and clinical process improvement. The Prospective DIA provides item change recommendations and documentation prompts. The latter are triggered by universal data integrity issues such as those described in this application, as well as specific issues triggered by regulators' concerns as expressed through publicly-available reports and transmittals, the aggregated regulatory and reimbursement experience of the facilities using the DIA system, and each facility's prior audit history. When specific issues are also universal issues that capture clinical relationships among MDS items, they are included in the data integrity scores and receive the highest weight on the regulatory compliance and/or reimbursement dimensions. When they are not universal issues or when they are merely specific payers' documentation requirements for individual MDS items, they are not included in the data integrity scores. 11) Estimation of the financial impact of data integrity issues. Payers for nursing home care, e.g., Medicare fiscal intermediaries (FIs), will decrease payment to nursing homes if their reviewer determines that some of the care rendered was not medically necessary, if the relevant MDS assessment was not filed on time, or if there were errors in assessment and coding of items critical to the calculation of the resident's Resource Utilization Group (RUG). Except for downgrades or denials of payment based on gross errors or failure to perform and file electronic MDS assessments